1 fc 2174

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE    (8/26/05)

**Application No: 09/804,385**

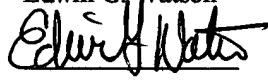**Applicant: Edwin G. Watson**                    **Art Unit: 2174**

**Filed: March 12, 2001**                         **Examiner: Truc T Chuong**

## CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service "Priority Mail", tracker # 03041560000262975891, addressed to the Assistant Commissioner for Patents, Alexandria, VA 22313-1450, on August 26, 2005.

Edwin G. Watson

_8/26/05_

Assistant Commissioner for Patents

Alexandria, VA 22313-1450

Fax: (703) 872-9306

Sir/Madam:

In response to the office communication of 7/26/05, applicant respectfully submits an affidavit on a separate paper per 37 CFR 1.4 . The remarks previously submitted are unchanged. Applicant requests that the examiner reconsider the above identified application. The applicant believes that the Examiner will now find the claims of this application allowable. Favorable reconsideration of the application is courteously requested.

Respectfully Submitted,

Edwin G. Watson

AFFIDAVIT

I, Edwin G. Watson, of Cherry Hill, NJ, being duly sworn, depose and state as follows:

1) I conceived, wrote, and mailed the patent disclosure entitled "A Method for Displaying and Scrolling Data", which was mailed in the U.S. Postal Service on 3/13/1999 and received and filed by the USPTO as Document No. 453185 on 3/18/1999, according to USPTO Disclosure Document Program procedures. A photocopy of said disclosure is attached to this affidavit, and is listed as Exhibit A, and includes the date stamped receipt from the USPTO indicating the document number as filed. I believe this use of this disclosure document, as documentary evidence of conception, is consistent with MPEP 715.07 (H).

2) I researched, performed prior art searches, self taught myself on filing a patent application, drafted a Pro Se patent application, and filed the non-provisional patent application No: 09/804,385 entitled "Method for Displaying Data Including Display Status Feedback". Said patent application directly referenced said disclosure document No. 453185.

3) I allowed publication of said patent application No. 09/804,385. The publication date of 10/12/2002 occurred 18 months after application and approximately 10 ½ months before the first office action.

i) Facts

4) Regarding the last office action related to application No. 09/804,385 (dated 2/24/2005) all the 102(e) rejections referenced U.S. Patent No. 6,803,930 B1, said U.S. Patent No. 6,803,930 B1 lists 12/16/1999 as its filing date. Comparatively, said Disclosure Document (No. 453185) was filed approximately 9 months earlier on 3/18/1999.

5) Said Patent Application No. 09/804,385 clearly referenced said disclosure document (No. 453185) in two places; first on page 1 under "Cross Reference to Related Applications", and second under a separate paper enclosed in the application titled "Letter of Reference to Disclosure Document" and was noted on the Utility Patent Application Transmittal form (PTO/SB/05) and as suggested by the Disclosure Document Procedures.

1

6) In general, said Disclosure Document (No. 453185) Exhibit A, clearly teaches the method of displaying and identifying multiple sections of a data file on a display, and the method of marking displayed data based on said data's status, with status being whether data been previously displayed or not, said marking serving to clearly differentiate data in a display, and allows a user to visually identify it from other displayed data not previously displayed. Additionally, Figure 1 (13 and 18) of said Disclosure Document (No. 453185) clearly shows cross hatching or shading a section of a computer display as a method of marking displayed data. I believe that said Disclosure Document (No. 453185) establishes the invention of the subject matter of the rejected claims, and was disclosed prior to the effective date of the reference (U.S. Patent No. 6,803,930 B1) on which the rejections were based.

7) In response to the office action of 2/24/2005, and specifically to the rejections of claims 21 thru 28 and 30 thru 35, and 41 thru 44, (both method and system claims) which reference U.S. Patent No. 6,803,930 B1, col. 4, lines 23-32, col. 5 lines 20-27, col. 7 lines 1-30 and 35-45, and figures 7, 8, 12a and 13b, concerning the subject matter of viewing a first portion of data, marking said first portion, performing a scroll operation, and viewing a second portion with visual indicators distinguishing the first and second portions, and the visual indication being a modification of the background of the display, and visual indication within the display to differentiate between previously viewed content and newly presented content, I believe said disclosure document (No. 453185) establishes invention of the subject matter of said rejected claims, prior to the effective date of the reference (U.S. Patent No. 6,803,930 B1) on which the rejections are based. This can be shown by the following excerpts from said disclosure document (No. 453185), Exhibit A, which discloses the invention and key areas of the invention including; identifying subsets or portions of a larger data set as previously displayed or newly displayed, performing scrolling operations to display multiple subsets on a display area, marking said display for differentiating subsets or portions of a larger data set, and various types of marking such as shading, bolding, font changes or spacing changes. Specifically, page 2, paragraph 1, states

"This invention disclosure relates to a system and method to display portions of a data set on a viewable device, as typically found in a computer system, and includes methods to discern between data which has previously been displayed as compared to new or previously undisplayed data." In addition, page 2, paragraph 1 continues "More particularly, this invention describes a system and methods which provides scrolling tools which allow a user to view portions of a set of data by scrolling or jumping through the data set while having subsets of the data set displayed in a viewable area of the display system. Furthermore in the process of moving around, and displaying portions of the data set, indicators are shown which alert the operator of those portions of the data set which have been viewed previously." In addition page 3, paragraph 2 states "This invention therefore proposes a system and methods which allow a continuous presentation of data while scrolling through data, by any means or direction, which allows the user to see fresh, previously undisplayed data, with respect to previously displayed data for any size data buffer or viewable display area. The system consists of means to determine sizes of the data buffer in memory, size of the current display area or areas, position of the currently displayed data with respect to the data buffer in memory, and to mark data which has been displayed, so as to arrange new data to be always be displayed in the expected portion of the display area, or visibly mark or shade the previously displayed data, so as to differentiate said data from the fresh previously undisplayed data. Multiple differentiator means may also be implemented which distinguish data which was last to be displayed from second, third, or more previously displayed data events, in a time history fashion. Differentiation means may also be implemented which distinguishes data which has previously been displayed and is forwardly placed in the buffer versus afterwardly placed, with respect to the currently buffer position, and relative to the direction of motion through the data buffer." Additionally, page 4, paragraph 2 states "In addition the disclosed invention may incorporate an algorithm by which the status of the display is compared to the input by the user for a display change, and whereby the subsets of data are compared for status of being displayed, resulting in a display of data as the user requested, and presented in a

fashion <u>which allows continuous presentation of the data to the user, along with markers which identify status and or display history of said data as necessary. Methods to mark or discriminate said displayed data and the status thereof, for example but not limited to, the background shading or gradient shading of said data which may have been just previously been displayed as a result of the last scroll input command, so as to identify to the user that said data was available for viewing in the previous configuration of the display area, and may have already been viewed by the user, whereas the non shaded data is freshly retrieved data and typically the user can direct their eyes to that area of the display for resumption of viewing. Other means not specifically mentioned can also be employed to achieve the same differentiation means and are within the spirit of the invention, including but not limited to bold lettering, underlining, font changes, spacing changes, etc.</u>"
In addition page 4, paragraph 3 states "Said fresh data may require a smaller display area than the current display area is sized to, and as such may not displace a significant portion of the just previously data, resulting in the fresh data being displayed at an unexpected location of the viewable area in combination with a significant amount of just previously displayed data. This phenomena results in the user having to scan to field to locate the beginning of the new data field. <u>The disclosed system thereby marks and distinguishes the just previously displayed data from the fresh data and allows the user's eye to quickly locate said fresh data, and resume viewing.</u>"

8) Figure (1) page 6 of said disclosure document (No. 453185) Exhibit A, shows the relationship between a large data file and display areas of different portions of said data file at different scrolling locations in a viewing session, and thus identifying subsets, or what can be called a first and second portion of the data set and the technique of scrolling through said large data set. The method of displaying a first portion of a larger data set, marking the first portion, scrolling to a second portion of said data set, and displaying the combination of data set portions with visual differentiating marking, I believe is disclosed in disclosure document (No. 453185) and specifically in the excerpt from page 5, paragraph 2, which states "<u>Figure (1) depicts one embodiment of the disclosed invention,</u>

4

showing relations between said data buffer 1 and viewable display areas 2-4, 16 and 19 at various locations in the travel through said data buffer 1. As a user may travel from top to bottom of data buffer 1, a viewable display area 2 is shown as it would display a portion of data buffer 6, which is substantially in the middle of data buffer 1, and is identified by an algorithm as the currently displayed data 6, and in this particular case as never before displayed data, and is displayed as such on the display 10. Scroll bars and controls 15a preferably are employed by the user to invoke moving said data buffer 1 through said display area 2, and in this operational example where said data buffer 1 was originally accessed from the top, prior to displaying the currently displayed data 6, having earlier displayed a set designated previously displayed data 5. Similarly data in said buffer 7, having never been displayed is designated by the algorithm as never displayed data. As a user may travel toward the end of said buffer 1, to a currently displayed data set 8, which displays on a display area 3 as displayed data 11, all areas at this time in the course of events that were previously displayed are designated as previously displayed data. From this given position in said data buffer, as the user may choose to initiate a scroll down in the display area 3, using controls 15b, whereas the remaining data in said data buffer 1, currently designated as never displayed data 9 requires by nature of display area parameters, less display area than the display area currently offers, the scroll action results in a display area 4 with said never displayed data 9 being displayed in area 12, and previously current and now previously displayed data 8 being displayed in display area 4 with a means of marking, shading, or otherwise differentiated displayed data 13. Said differentiating means allows easy and accurate continuation of viewing by the user whereas the new data 12 is not displayed with a starting location as expected by the user, as may have been the norm for previous scroll events."
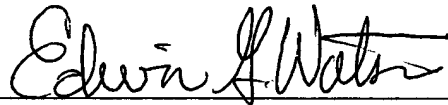

ii) Diligence

9) I believe I worked with reasonable diligence on the process of reducing to practice the invention described herein, from the point of conception through the

5

point of filing the non-provisional Patent Application (No: 09/804,385), and more particularly from the period just prior to the effective date of the reference (U.S. Patent No. 6,803,930 B1) to the point of filing the patent application. Tasks performed in this period which demonstrated reasonable diligence included:

a) Performing multiple searches for prior art, requiring self-taught searching methods and several trips to the USPTO Depository Library at the Philadelphia Free Public Library.

b) Significant use of on-line web searching to search for prior art and similar inventions and/or products available in the marketplace.

c) Significant time spent self-teaching myself the procedures for drafting and filing a Pro Se, non-provisional Patent Application, requiring reading several books including; "Patent it Yourself", Pressman, 3$^{rd}$ edition 1992 , "Patenting Manual", Alan M. Hale, 2$^{nd}$ edition, 1983, "General Information Concerning Patents" U.S. Department of Commerce, Patent and Trademark Office, 1994, "Patent Notes for Engineers", C. D. Tuska, 7$^{th}$ edition, 1956. Additionally, significant time was spent on the Internet researching published notes on methods for drafting a patent, including content and format, and the preparation of patent drawings.

d) Use of commercial off-the-shelf software to simulate the methods of scrolling, highlighting (marking), and viewing, as described in said patent disclosure document.

e) Drafting several sets of claims and self-teaching myself on claim terminology and structure, in particular method claims and system claims.

f) Searching and reading several reference patents to understand how to draft a patent, including: U.S. Patent No. 5,828,374, "Method and Apparatus for Selecting Characters Along a Scroll Bar with Slider", U.S. Patent No. 5,714,971, "Split Bar and Input/Output Window Control Icons for Interactive User Interface", U.S. Patent No. 5,196,838, "Intelligent Scrolling", U.S. Patent No. 5,333,247, "Scrolling Tools for Text and Graphics in a Display System", and U.S. Patent No. 5,838,320, " Method and System for Scrolling Through Data".

10) In addition to practicing reasonable diligence during the period of conception and the reported filing date of the reference (U.S. Patent No. 6,803,930 B1), the invention was reduced to practice by demonstration, using manual techniques to simulate the marking procedure, and standard off-the-shelf software capable of performing word processing and scrolling procedures. During the period between conception of the invention and the reported filing date of the reference (U.S. Patent No. 6,803,930 B1), using a Gateway 2000 4DX-33V computer, running MS Windows 3.1, and MS Word, a portion of a text file was displayed in the display area, the displayed text data was marked by manually selecting said portion, resulting in said portion being highlighted or marked. A scroll command was then executed to scroll less than a full page. The result was a display with previously displayed text data marked by said highlighting followed by fresh text data displayed in the same display area, said marking guiding the eye of the user to continue reading at the location where the fresh data begins and the marking ends. This procedure clearly demonstrated the effectiveness and operation steps of the invention.
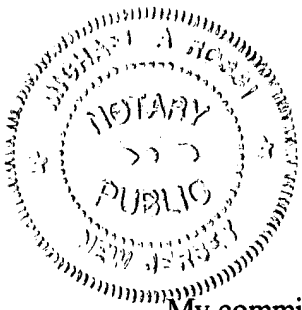
The above facts are true and correct to the best of my knowledge and belief, and I acknowledge that false statements are subject to penalties under the law.

_____

Edwin G. Watson

Acknowledgement

Subscribed and sworn to before me this _26th_ day of _August_, _2005_.

_____
Notary Public
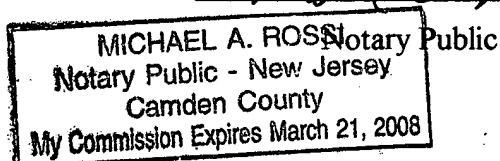
My commission expires:

Exhibit A

Ed Watson
50 Buttonwood Ct.
Voorhees, N.J. 08043

March 13, 1999

Commissioner of Patent and Trademarks
Box D.D.
Washington, D.C. 20231

Request For Participation in the Disclosure Document Program

Disclosed Invention: "A Method for Displaying and Scrolling Data"

Inventor:      Edwin G. Watson
               50 Buttonwood Rd.
               Voorhees, N.J.  08043-2000

The undersigned, being the inventor of the disclosed invention, requests that the enclosed papers be accepted under the Disclosure Document program, and that they be preserved for a period of two years (or longer if I later refer to it in a paper filed in a patent disclosure).

Enclosed is the disclosure, consisting of six pages of written description and drawings, a $10.00 check, a stamped addressed return envelope, and a duplicate copy of this letter.

Sincerely,

*[signature: E.G. Watson]*

Edwin G. Watson

**DISCLOSURE DOCUMENT NO.**

**453185**

**FILING FEE: $10.00**
**RETAINED FOR 2 YEARS**
**THIS IS NOT A PATENT APPLICATION**
PTO-1652 (4/96)

# Patent Disclosure

Title:  A Method for Displaying and Scrolling Data.

Inventor:     Edwin G. Watson
              50 Buttonwood Rd
              Voorhees,
              Camden County,
              New Jersey     08043-2000

Date Conceived: 6/6/98
Notebook Reference: 002- 10
Date of Initial Search: 11/07/98
Date Disclosed: 03/13/99

Signature and Date:  _E.G. Watson_                    _3/13/99_

## Introduction:

This invention disclosure relates to a system and method to display portions of a data set on a viewable device, as typically found in a computer system, and includes methods to discern between data which has previously been displayed as compared to new or previously undisplayed data. More particularly, this invention describes a system and methods which provides scrolling tools which allow a user to view portions of a set of data by scrolling or jumping through the data set while having subsets of the data set displayed in a viewable area of the display system. Furthermore in the process of moving around, and displaying portions of the data set, indicators are shown which alert the operator of those portions of the data set which have been viewed previously.

## Background:

A typical computer system and the like consists of a display device which has a function to display data which may reside inside the memory of the computer. Typically the selected data in memory or data buffer to be displayed is larger than the specified display area within the one or more viewable areas of the display device is capable of displaying. As a result a system is required to allow the user to access various portions of the data buffer, as the user sees fit.

Well known to the art is the application of scroll bars which act as the graphical interface in which the user can direct the system to display the desired portion of the data buffer in visible area of the display by employing a point and click device, such as a mouse. Said scroll bars typically are arraigned in a vertical and horizontal fashion, providing vertical and horizontal control respectively. Functionality of the scroll bars include gross or fine movements of the data from the data buffer to the display area. Depending on the section of the scroll bar pointed to and clicked on, the scrolling function can be an incremental line by line movement of fresh previously undisplayed data to the display, or page by page movement of fresh data to the display, where a page is considered substantially the amount of data in the display area. The scrolling motion can be, but is not limited to, a forward or backward direction relative to the data buffer, and a vertical or horizontal direction. The scroll bar typically consists of a multifunctional slider block of which one function is to show the position of the viewed data with respect to the whole of the data in the buffer by the visible position of the slider block in the scroll bar. A second function of the slider block is to show the relative size of the viewed data to the whole buffer size, by displaying an adjusted size of the slider block within the scroll bar. A third function of the slider block is to be grabbed by the pointer device an slid along the slider bar thus displaying portions of the data buffer in proportion to the relative position of the slider within the scroll bar. Scrolling page by page, or jump scrolling is typically accomplished by a single click of the pointing device in the area of the scroll bar adjacent to the slider block on the side of the slider block pertaining to the direction that the user wishes to scroll. When scrolling page by page the system determines what the current size of the viewable area is

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an acquires from the data buffer a substantially equal amount of fresh data adjacent to the displayed data, and displays that data to the display area, displacing the currently viewed data and thus providing a contiguous feed of data to the display. In the previous procedure, when the end of the data buffer is approached, in any direction, the last block of fresh data is typically smaller than the visible area of the display, resulting in the visible area of the display being only partially filled by fresh data after a page by page scroll event. The user while viewing the data usually can expect fresh data to be displayed at the top of the viewable area, whereas the fresh data, if smaller than the visible display area, will begin somewhere in the middle of the display area. resulting in an interruption in the users continuous viewing of the data.

This invention therefore proposes a system and methods which allow a continuous presentation of data while scrolling through data, by any means or direction, which allows the user to see fresh, previously undisplayed data, with respect to previously displayed data for any size data buffer or viewable display area. The system consists of means to determine sizes of the data buffer in memory, size of the current display area or areas, position of the currently displayed data with respect to the data buffer in memory, and to mark data which has been displayed, so as to arrange new data to be always be displayed in the expected portion of the display area, or visibly mark or shade the previously displayed data, so as to differentiate said data from the fresh previously undisplayed data. Multiple differentiator means may also be implemented which distinguish data which was last to be displayed from second, third, or more previously displayed data events, in a time history fashion. Differentiation means may also be implemented which distinguishes data which has previously been displayed and is forwardly placed in the buffer versus afterwardly placed, with respect to the currently buffer position, and relative to the direction of motion through the data buffer.

## Summary:

The disclosed invention comprises a system and methods for providing scrolling of data in a typical computer system and the like. The scrolling system includes, but is not limited to a data buffer or data storage or memory area which stores data to be displayed on a display device and presented to the user, and can be controlled by the user. Said data may be, but is not limited to, incoming data from any type of connection to other systems, data which is stored within the computer, or data which is the result of some application or calculation. Said data may be of any type or format, including but not limited to text, graphics, or a combination thereof. A display device having one or multiple viewable display areas which may be addressed individually or simultaneously, at the discretion of the user. Said viewable display areas with one or multiple scrolling means to control the movement of data from said data buffer to said visible display area. Said scrolling means preferably consisting of scroll bars, slider blocks, and one or more directional arrows, which provide an interface means for the user to direct the scrolling system how and where to move the visible display through the data buffer. A point click device such as a mouse for providing a means for the user to address the functions of said scroll bar and its

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elements. The designated currently displayed data set, being a subset of said data buffer. The designated currently undisplayed data, being a subset of said data buffer, and being that subset which is substantially that not being a part of said currently displayed data. The designated set, never displayed data, being a subset of said data buffer, and being a subset of said currently undisplayed data and being identified as not being previously displayed within a given time period or designated viewing session.

In addition the disclosed invention may incorporate an algorithm by which the status of the display is compared to the input by the user for a display change, and whereby the subsets of data are compared for status of being displayed, resulting in a display of data as the user requested, and presented in a fashion which allows continuous presentation of the data to the user, along with markers which identify status and or display history of said data as necessary. Methods to mark or discriminate said displayed data and the status thereof, for example but not limited to, the background shading or gradient shading of said data which may have been just previously been displayed as a result of the last scroll input command, so as to identify to the user that said data was available for viewing in the previous configuration of the display area, and may have already been viewed by the user, whereas the non shaded data is freshly retrieved data and typically the user can direct their eyes to that area of the display for resumption of viewing. Other means not specifically mentioned can also be employed to achieve the same differentiation means and are within the spirit of the invention, including but not limited to bold lettering, underlining, font changes, spacing changes, etc.

The display of a small portion of just previously displayed data in a new configuration of a view area is sometimes advantageous for continuity of display, however identifying said data as such is further helpful in resuming viewing data and such. The display a some portion of just previously displayed data in a new configuration of a view area is sometimes unavoidable because when approaching the limit of fresh data in said data buffer. Said fresh data may require a smaller display area than the current display area is sized to, and as such may not displace a significant portion of the just previously data, resulting in the fresh data being displayed at an unexpected location of the viewable area in combination with a significant amount of just previously displayed data. This phenomena results in the user having to scan to field to locate the beginning of the new data field. The disclosed system thereby marks and distinguishes the just previously displayed data from the fresh data and allows the user's eye to quickly locate said fresh data, and resume viewing.

In another embodiment of the disclosed invention, said system algorithm means always locates the start of fresh data to a predetermined location in the viewable area, regardless of the relative size of the fresh data as compared to the viewable area data size, and regardless if the end of buffer is reached. Said algorithm means may also fill void areas with null data, added to the buffer or view data, to accommodate filling the viewable area. Shading or other identification means may be used in conjunction with said repeat location method to further identify new and/or old data.

In another embodiment of the disclosed invention, the system identifies or relocates data in the viewable display area when said viewable display area is changed by resizing, or stretching or the like. Identification of said data is similar to said methods of determining

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fresh from previously displayed data, as detailed above. relocation of data is similar to that described above whereby fresh data is routinely located on one predetermined portion of the viewable area. Yet another embodiment incorporates an algorithm means which resizes the viewable area to adjust to incoming buffer data which may be less than that amount needed to substantially fill the viewable area.

Figure (1) depicts one embodiment of the disclosed invention, showing relations between said data buffer 1 and viewable display areas 2-4, 16 and 19 at various locations in the travel through said data buffer 1. As a user may travel from top to bottom of data buffer 1, a viewable display area 2 is shown as it would display a portion of data buffer 6, which is substantially in the middle of data buffer 1, and is identified by an algorithm as the currently displayed data 6, and in this particular case as never before displayed data, and is displayed as such on the display 10. Scroll bars and controls 15a preferably are employed by the user to invoke moving said data buffer 1 through said display area 2, and in this operational example where said data buffer 1 was originally accessed from the top, prior to displaying the currently displayed data 6, having earlier displayed a set designated previously displayed data 5. Similarly data in said buffer 7, having never been displayed is designated by the algorithm as never displayed data. As a user may travel toward the end of said buffer 1, to a currently displayed data set 8, which displays on a display area 3 as displayed data 11, all areas at this time in the course of events that were previously displayed are designated as previously displayed data. From this given position in said data buffer, as the user may choose to initiate a scroll down in the display area 3, using controls 15b, whereas the remaining data in said data buffer 1, currently designated as never displayed data 9 requires by nature of display area parameters, less display area than the display area currently offers, the scroll action results in a display area 4 with said never displayed data 9 being displayed in area 12, and previously current and now previously displayed data 8 being displayed in display area 4 with a means of marking, shading, or otherwise differentiated displayed data 13. Said differentiating means allows easy and accurate continuation of viewing by the user whereas the new data 12 is not displayed with a starting location as expected by the user, as may have been the norm for previous scroll events.

A particular display area 16 shows currently displayed data 17 and previously displayed data 18 which may occur in the event the user using scrolling means, scrolls backward from a fully current display 10 to redisplay data designated as previously displayed data 5. In a different embodiment, a display area 19 incorporates an algorithm which when determining that the requested previously undisplayed data 9 requires less area than the display area 19 offers, displays the previously undisplayed data 9 at substantially the expected position in the display area, and further generates and displays null or fill data 21 to fill the remainder of the area.
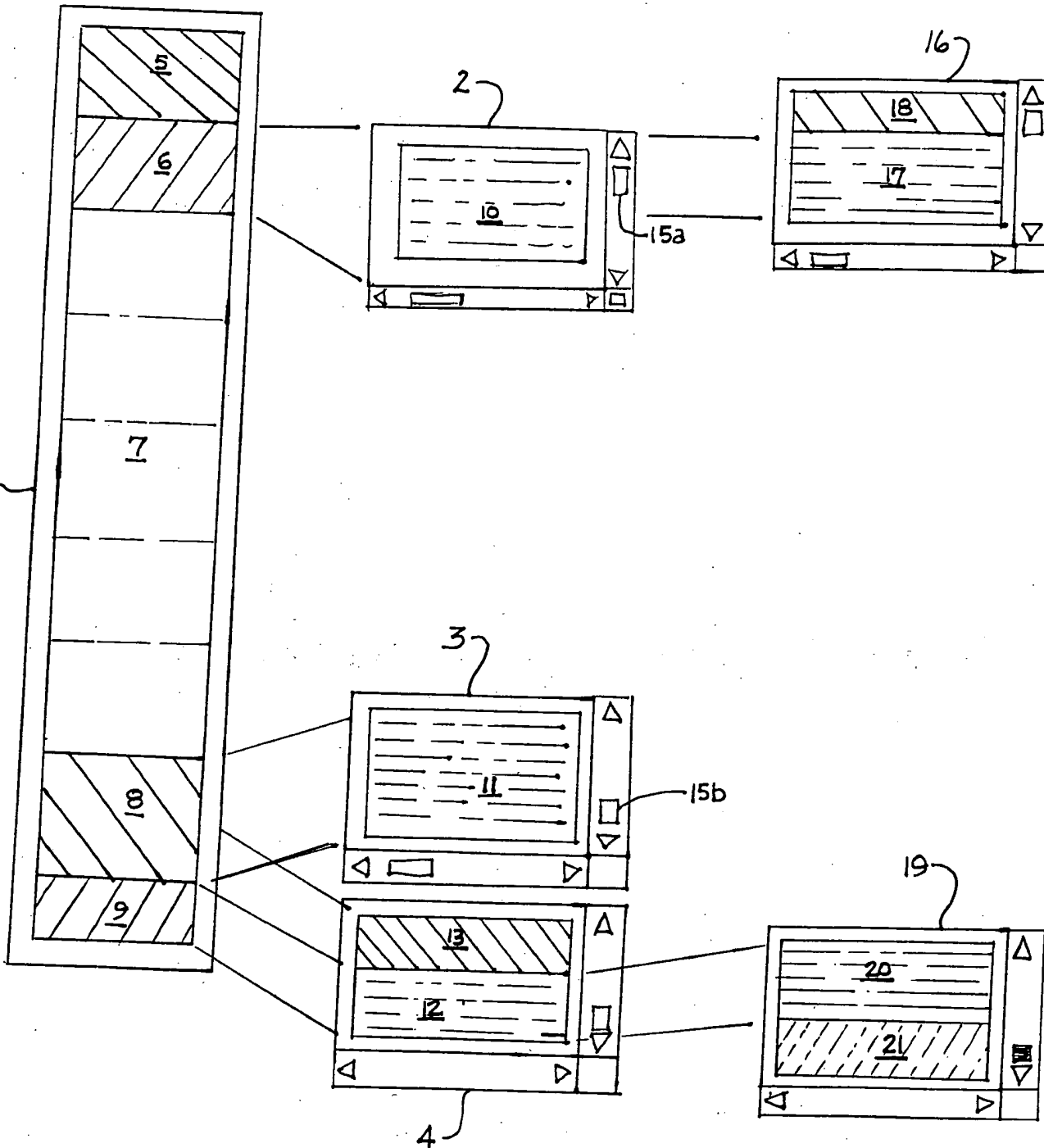
Signature and Date: _E. H Watson_         _3/13/99_

Fig. 1

Signature and Date: _E. G. Watson_ _3/13/99_